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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/622,837 | 07/18/2003 | Minoru Toda | MSI-166 | 4778 |

45722 7590 10/11/2006

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| EXAMINER |
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JAWORSKI, FRANCIS J

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| ART UNIT | PAPER NUMBER |
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3768

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,837

Applicant(s)

TODA ET AL.

Examiner

Jaworski Francis J.

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9-24,27-41,44-59,62-77,79-82 and 84 - 87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9-24,27-41,44-59,62-77,79-82 and 84-87 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2-6-06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 2, 4, 9 -10, 14 – 24, 27 – 38, 40 – 41, 44 - 45, 48 – 59, 62 - 73, 75 – 77, 79 – 82 and 84 - 87 are rejected under 35 U.S.C. 102(b) as being anticipated by Park et al (US5495137) insofar as both the asymmetric bimorph type and curved length transducer modes involve end clamping of the respective part-cylindrical curved surfaces (see col. 2 lines 37 – 68) and complementary curved housing portions serving as a reference point for piezoelement stressing and as an environmental cover and acoustic aperture overlay, and where the element serves as a receiver for transit-time based proximity timing. At least some embodiments involve bonding of the transducer to a diaphragm portion of the housing so that flexion on the curved transducer perimeter may occur, as shown in the later figures.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 3768

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al as applied to claim 1 above, and further in view of Vesely et al (US5779638) since whereas the former is silent as to time-of-flight thresholding and triggering, it would have been obvious in view of the latter that to prevent noise interference with accurate TOF measurement, one might template a transmitted waveform with respect to a received one stored in memory to get the exact time lapse and this would then become a triggering and amplitude threshold issue.

Claims 11 – 13 and 46 - 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al insofar as whereas Col. 8 lines 14 – 37 states that a grid may reflect ultrasound when placed as a protector ahead of the transducer, the subsequent portion suggests that such metalizations if made as an outer electrode in direct contact with the piezo material as well as an environmental overlay would mitigate the problem.

Claims 39 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al as applied to claim 1 above, and further in view of Kithil et al (US5802479) insofar as the latter would teach that it was well known to use electrostatic type sensors for sensing proximity which is the purpose of the Park et al sensing system..

Response to Arguments

Art Unit: 3768

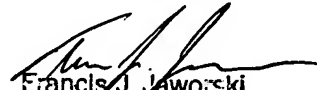
Discovery of the Park et al reference has negated previous arguments in view of the analogy between a clamped or pre-stressed proximity ultrasound receive sensor mounted on a portable (transportation) device and secured to a housing overlay for wear and environmental protection.

This action is NOT made final however the case should be prepared for final action.

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

092906


Francis J. Jaworski
Primary Examiner